

WHAT IS CLAIMED IS:

1. A circuit interrupting device for use with an electrical power distribution system, comprising:

a circuit interrupter having a closed position allowing current to pass through said circuit interrupter and an open position preventing current from passing through said circuit interrupter;

an actuator electrically and mechanically coupled to said circuit interrupter, said actuator moves said circuit interrupter between said closed and open positions upon occurrence of a fault current; and

first and second terminals electrically connected to said circuit interrupter and being adapted for electrical connection to the power distribution system, defining a current path between said first terminal, said circuit interrupter, and said second terminal, allowing current of the power distribution system to pass through said current path so that the potential of said circuit interrupter is the same as the potential of the power distribution system,

whereby said circuit interrupter and said actuator are not mounted in a grounded container, and said first terminal, said circuit interrupter, said actuator, and said second terminal being ungrounded.

2. A circuit interrupting device according to claim 1, wherein

said circuit interrupter includes a primary contact and a movable contact that moves relative to said primary contact between said closed positions and said open position; and

said actuator includes a shaft coupled to said movable contact for substantially simultaneous movement with said movable contact between said closed and open positions.

3. A circuit interrupting device according to claim 1, wherein

said movable contact and said shaft are connected without insulation being disposed therebetween.

4. A circuit interrupting device according to claim 1, wherein an electronic control is electrically connected to each of said circuit interrupter and said actuator, respectively, said electronic control communicates with said actuator to move said movable contact of said circuit interrupter from said closed position to said open position upon occurrence of the fault current.

5. A circuit interrupting device according to claim 1, wherein said circuit interrupter is supported by a dielectric housing; and said actuator is received in a housing, said housing of said actuator is coupled to said dielectric housing of said circuit interrupter.

6. A circuit interrupting device according to claim 5, wherein said housing of said actuator is made of a conductive material.

7. A circuit interrupting device according to claim 5, wherein said dielectric housing of said circuit interrupter and said housing of said actuator are ungrounded.

8. A circuit interrupting device according to claim 5, wherein said first terminal extends from said circuit interrupter; and said second terminal extends from said housing of said actuator remote from said first terminal.

9. A circuit interrupting device according to claim 1, wherein said actuator is a solenoid.

10. A circuit interrupting assembly for an electrical power distribution system, comprising:

a first insulator adapted for connection to the power distribution system, said insulator has a first conductive bracket; and

a circuit interrupting device coupled to said first conductive bracket of said insulator, said circuit interrupting device including,

a circuit interrupter including a dielectric housing with a primary contact and a movable contact enclosed therein, said movable contact being movable relative to said primary contact between a closed position allowing current to pass through said circuit interrupter and an open position separating said contacts and preventing current from passing through said circuit interrupter,

an actuator coupled to and disposed adjacent to said circuit interrupter, said actuator being received in a housing and including a shaft coupled to said movable contact of said circuit interrupter for substantially simultaneous movement without insulation being disposed between said shaft and said movable contact, said shaft moves said circuit interrupter between said closed and open positions upon occurrence of a fault current, and

first and second terminals electrically connected to said circuit interrupter contacts, and at least one of said first and second terminals being connected to said first conductive bracket,

whereby a current path is defined between said first terminal, said circuit interrupter and said second terminal, allowing current of the power distribution system to pass through said current path so that the potential of said circuit interrupter is the same as the potential of the power distribution system, said circuit interrupter and said actuator are not mounted in a grounded container and said first terminal, said circuit interrupter, said actuator, and said second terminal being ungrounded.

11. A circuit interrupting assembly according to claim 10, wherein a second insulator includes a second conductive bracket connected to the other of said first and second terminals.

12. A circuit interrupting assembly according to claim 11, wherein said first and second terminals are removably coupled to said first and second conductive brackets, respectively, allowing complete removal of said circuit interrupting device thereby providing a visual interruption in said current path.

13. A circuit interrupting assembly according to claim 10, wherein said dielectric housing of said circuit interrupter is connected to said housing of said actuator.

14. A circuit interrupting assembly according to claim 13, wherein said housing of said actuator is formed of a conductive material and electrically connected to said second terminal so that the current path is defined through said housing of said actuator.

15. A circuit interrupting assembly according to claim 14, wherein said dielectric housing is formed of a polyester material; and said conductive housing is formed of aluminum.

16. A circuit interrupting assembly according to claim 10, wherein said actuator is a solenoid.

17. A circuit interrupting assembly according to claim 10, wherein an electronic control is received in said housing of said actuator and is electrically connected to said actuator, said electronic control communicates with said actuator to trigger said shaft to move said movable contact of said circuit interrupter from said closed position to said open position upon occurrence of the fault current.